CENTERS FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

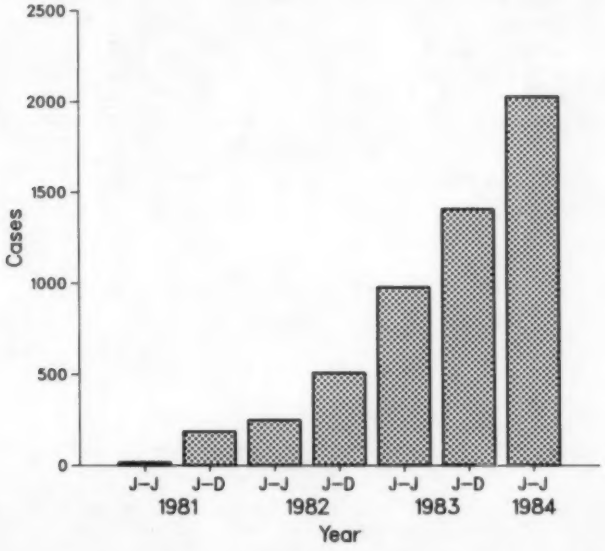
Current Trends

Update: Acquired Immunodeficiency Syndrome (AIDS) — United States

As of November 26, 1984, physicians and health departments in the United States had reported 6,993 patients meeting the surveillance definition for acquired immunodeficiency syndrome (*1,2*). Over 86% of the adult AIDS patients and 82% of the pediatric patients have been reported since January 1983 (Figure 1). Three thousand three hundred forty-two (48%) of all reported patients are known to have died (48% of the adults and 69% of the children), including 73% of patients diagnosed before January 1983.

Adult Patients: Among 6,921 adult AIDS patients, 59% of cases have occurred among whites; 25%, among blacks; 14%, among persons of Hispanic origin; and 2%, among persons of other or unknown race/ethnicity. Seventy-five percent of the adults were reported to be residents of New York, California, Florida, or New Jersey, with the remainder reported from

FIGURE 1. AIDS cases, by half year of report — United States, 1981 through first half, 1984



AIDS – Continued

41 other states, the District of Columbia, and Puerto Rico. Identified risk groups of adult AIDS patients and trends for each group are shown in Table 1. Among the 54 AIDS patients who were heterosexual sex partners of persons with AIDS or with an increased risk for acquiring AIDS, 49 (91%) were women.

Of the adult AIDS patients, 263 (4%) have not been placed in any of the identified risk groups and are classified as noncharacteristic patients. One hundred eighty-six (71%) of the noncharacteristic patients were male; 34%, white; 43%, black; and 19%, of Hispanic origin. Investigations of 65 of the male noncharacteristic patients have identified 17 (26%) who reported a history of sexual contact with female prostitutes. Five of the 17 gave a history of over 100 heterosexual partners in the past 5 years. Seven were Hispanic; five, black; four, white; and one, Asian. Thirteen had *Pneumocystis carinii* pneumonia (PCP); three had Kaposi's sarcoma (KS); and one had another opportunistic disease. One of the nine noncharacteristic women interviewed claimed to be a former prostitute.

Pediatric Patients: Of 72 patients under 13 years of age, 81% were reported to be residents of New York, California, Florida, or New Jersey, with the remainder reported from nine other states. Forty-two (58%) of the 72 patients were male. Fifty (69%) had PCP without KS; four (6%) had KS without PCP; two (3%) had both PCP and KS; and 16 (22%) had another opportunistic disease without either PCP or KS. Twenty-five percent of the pediatric patients are white; 54%, black; and 19%, of Hispanic origin. Twenty-nine (40%) of the 72 pediatric patients came from families in which one or both parents had histories of intravenous (IV) drug abuse; 17 had one or both parents who were born in Haiti; 12 had received blood or blood components before their onsets of illness; four had hemophilia; one had a father who was bisexual; and one child's parents deny any risk factors. Risk-factor information on the parents of the eight remaining patients is incomplete.

Eighty-one adults (1% of adult patients) and 12 children (17% of pediatric patients) with transfusion-associated AIDS (TA-AIDS) have no other risk factors and were transfused with blood or blood components within 5 years of illness onset. TA-AIDS patients received blood from one to 75 donors (median 16 donors); interval from tranfusion to diagnosis was 4 months to 62 months (median 29 months for adults, 14 months for children). Median age at diagnosis of AIDS was 53 years for adults (range 19-81 years) and 14 months for children (range 4-46 months). Most adults received transfusions associated with surgery, while most infants with TA-AIDS were transfused for medical problems associated with prematurity (*3*).

TABLE 1. Adult AIDS patients, by patient group and date of report — United States, through November 1984

	Date of report							
	Before Dec. 1982		Dec. 1982-Nov. 1983		Dec. 1983-Nov. 1984			
Patient group	No. cases	(%)	No. cases	(%)	No. cases	(%)	Total	(%)
Homosexual/bisexual	636	(74.5)	1,600	(71.5)	2,802	(73.2)	**5,038**	**(72.8)**
IV drug user	121	(14.2)	401	(17.9)	668	(17.4)	**1,190**	**(17.2)**
Haitian	48	(5.6)	90	(4.0)	111	(2.9)	**249**	**(3.6)**
Hemophilia patient	7	(0.8)	11	(0.5)	28	(0.7)	**46**	**(0.6)**
Heterosexual contacts	8	(0.9)	19	(0.9)	27	(0.7)	**54**	**(0.8)**
Transfusion recipients	2	(0.2)	29	(1.3)	50	(1.3)	**81**	**(1.2)**
Noncharacteristic	32	(3.8)	87	(3.9)	144	(3.8)	**263**	**(3.8)**
Total	**854**	**(100)**	**2,237**	**(100)**	**3,830**	**(100)**	**6,921**	**(100)**

AIDS — Continued

Reported by State and Territorial Epidemiologists; AIDS Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Throughout 1984, the number of AIDS cases reported increased 74% compared to the same period of 1983. Forty-two states, the District of Columbia, and Puerto Rico now require reporting of AIDS cases to health departments. Although 45 states have reported cases, the majority of adult AIDS patients continues to be reported from a small number of states. The geographic distribution of AIDS among children with parents in high-risk groups is similar to that seen for heterosexual adult AIDS patients; over 89% are from New York, California, New Jersey, and Florida. In both children and heterosexual adults, AIDS is much more likely to present with PCP and other opportunistic infections than with KS. Although the number of AIDS cases being reported continues to increase in all patient groups, the rate of increase among Haitian AIDS patients is significantly less ($p < 0.001$) than among the remaining groups.

The proportion of adult patients outside identified risk groups for AIDS has remained stable. AIDS patients classified as noncharacteristic are a heterogenous group. For example, some patients, such as 11 with KS and normal immunologic studies, may not have AIDS, even though they meet the surveillance definition. For other patients, information concerning risk factors is incomplete. Still other noncharacteristic patients may have unknowingly been the sexual partners of risk-group members (*4*).

Heterosexual transmission of AIDS has been reported in both the United States and Africa (*5-9*). In the United States, such transmission has been uncommon. When heterosexual transmission has occurred, it has primarily been from men, particularly male IV drug users, to their female partners. However, in several African countries, heterosexual transmission appears to be the predominant mode in the spread of AIDS. In Zaire, where the male-to-female ratio of AIDS cases has been reported to be 1.1 to 1, transmission from women to men may be more common than in the United States (*8*). Furthermore, among 24 adults diagnosed as having AIDS in Rwanda, 12 of the 17 men were reported to have had contact with prostitutes, and three of the seven women were prostitutes (*9*).

The importance of female-to-male transmission in the spread of AIDS in the United States and the role, if any, of female prostitutes in this transmission have not been established. Women, including female prostitutes, could be exposed to the AIDS virus through sexual contact, use of IV drugs, or transfusion. However, the number of these women presently infected is likely to be small. It is not known if such women would be as efficient as heterosexual or homosexual men in transmitting the AIDS virus. Future studies will attempt to clarify and quantify the risks of female-to-male transmission and contact with prostitutes.

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Analysis of Trace Metals for Occupationally Exposed Workers

As many as 4 million U.S. workers may be exposed to toxic metals and other elements in such occupations as painting, welding, soldering, electroplating, alloying, mining, and electronic-component manufacturing and in facilities that produce brass, bronze, drugs, dyes, textiles, rubber, glass, batteries, and ceramics and enameling. Lung disease and dermatologic problems among these workers have resulted from exposure to metals and their compounds (*1*). Traditionally, industrial hygiene samples taken to evaluate the exposures of these workers have been analyzed for a limited number of elements; each elemental analysis often required

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TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	47th Week Ending			Cumulative, 47th Week Ending		
	Nov. 24, 1984	Nov. 26, 1983	Median 1979-1983	Nov. 24, 1984	Nov. 26, 1983	Median 1979-1983
Acquired Immunodeficiency Syndrome (AIDS)*	44	16	N	3,821	1,814	N
Aseptic meningitis	151	211	174	7,309	11,556	8,724
Encephalitis: Primary (arthropod-borne & unspec.)	15	27	27	1,045	1,695	1,412
Post-infectious	-	1	2	80	82	82
Gonorrhea: Civilian	14,863	15,636	15,743	753,862	815,862	903,183
Military	275	410	383	18,774	22,005	24,490
Hepatitis: Type A	465	366	468	19,267	19,249	22,802
Type B	533	447	413	23,264	21,574	18,619
Non A, Non B	84	68	N	3,360	3,074	N
Unspecified	120	123	173	4,894	6,561	9,391
Legionellosis	11	11	N	587	879	N
Leprosy	10	2	2	209	217	195
Malaria	15	5	12	894	727	961
Measles: Total**	59	36	36	2,485	1,415	2,855
Indigenous	57	16	N	2,195	1,121	N
Imported	2	20	N	290	294	N
Meningococcal infections: Total	37	51	51	2,409	2,461	2,461
Civilian	37	51	51	2,404	2,446	2,446
Military	-	-	-	5	15	15
Mumps	33	59	80	2,598	2,987	4,832
Pertussis	17	33	21	2,001	2,138	1,538
Rubella (German measles)	12	13	18	708	806	2,176
Syphilis (Primary & Secondary): Civilian	417	547	547	24,865	29,267	27,997
Military	16	6	8	276	356	346
Toxic Shock syndrome	10	11	N	424	385	N
Tuberculosis	332	428	428	19,130	21,060	24,496
Tularemia	3	2	1	274	270	236
Typhoid fever	5	6	6	337	415	466
Typhus fever, tick-borne (RMSF)	6	1	4	841	1,079	1,079
Rabies, animal	50	83	83	4,856	5,515	5,709

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1984		Cum. 1984
Anthrax	1	Plague	31
Botulism: Foodborne	17	Poliomyelitis: Total	3
Infant (Wash. 1, Calif. 1)	86	Paralytic	3
Other	6	Psittacosis	82
Brucellosis	110	Rabies, human (Calif. 1)	3
Cholera	-	Tetanus (Mo. 1, Hawaii 1)	59
Congenital rubella syndrome	4	Trichinosis	73
Diphtheria	1	Typhus fever, flea-borne (endemic, murine)	34
Leptospirosis (N.C. 1)	28	(Tex. 1, Calif. 2)	

*The 1983 reports which appear in this table were collected before AIDS became a notifiable condition.

**One of the 59 reported cases for this week was imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 24, 1984 and November 26, 1983 (47th Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1984	1984	Cum. 1984	Cum 1984	Cum. 1984	Cum. 1983	1984	1984	1984	1984	1984	Cum. 1984
UNITED STATES	3,821	151	1,045	80	753,862	815,862	465	533	84	120	11	209
NEW ENGLAND	128	3	46	2	20,782	21,087	3	17	-	4	-	11
Maine	-	-	-	-	904	1,026	-	-	-	-	-	-
N.H.	2	-	7	-	661	660	-	2	-	-	-	-
Vt.	1	-	5	-	345	399	-	-	-	-	-	-
Mass.	69	3	21	-	8,713	9,133	1	8	-	4	-	6
R.I.	6	-	-	-	1,487	1,166	1	2	-	-	-	4
Conn.	50	-	13	2	8,672	8,703	1	5	-	-	-	1
MID ATLANTIC	1,675	21	121	9	101,169	104,205	58	126	9	11	3	36
Upstate N.Y.	144	7	40	7	16,463	17,231	8	8	3	2	-	3
N.Y. City	1,223	3	11	-	38,632	41,555	25	74	-	5	3	31
N.J.	225	5	28	-	18,239	19,240	14	20	4	2	-	-
Pa.	83	6	42	2	27,835	26,179	11	24	2	2	-	2
E.N. CENTRAL	188	20	295	18	109,033	119,176	25	55	6	10	2	6
Ohio	20	5	96	9	28,619	31,048	6	5	-	1	-	2
Ind.	23	7	78	-	11,386	11,394	1	4	-	-	-	-
Ill.	89	-	27	6	25,749	34,816	10	16	3	4	-	2
Mich.	26	8	60	-	31,374	31,418	8	30	3	5	2	2
Wis.	10	-	34	3	11,905	10,500	-	-	-	-	-	-
W.N. CENTRAL	39	9	92	3	37,489	38,445	-	3	1	1	2	4
Minn.	9	2	41	-	5,618	5,317	-	-	-	-	1	2
Iowa	2	-	30	-	4,142	4,180	-	1	1	-	-	1
Mo.	23	6	11	-	17,997	18,913	-	1	-	1	-	1
N. Dak.	-	-	-	-	360	406	-	-	-	-	-	-
S. Dak.	-	-	2	1	888	953	-	-	-	-	-	-
Nebr.	3	-	1	-	2,752	2,498	-	-	-	-	-	-
Kans.	2	2	7	2	5,732	6,178	-	1	-	-	1	-
S. ATLANTIC	508	23	160	17	185,761	211,249	30	104	15	10	4	13
Del.	5	2	1	-	3,639	3,891	-	1	-	-	1	-
Md.	45	8	30	-	21,898	27,352	3	32	5	3	1	1
D.C.	77	-	-	-	13,698	14,388	-	-	-	-	-	1
Va.	33	4	28	5	18,204	19,413	10	6	-	-	1	4
W. Va.	4	-	39	-	2,426	2,336	1	1	1	-	-	-
N.C.	12	-	31	7	31,187	32,599	2	7	-	-	-	-
S.C.	8	-	4	-	19,631	19,453	-	10	-	2	-	-
Ga.	51	3	2	2	28,722	43,999	7	26	-	1	1	1
Fla.	273	6	25	3	46,356	47,818	7	21	9	4	-	6
E.S. CENTRAL	23	14	51	7	68,339	68,272	8	24	2	1	-	-
Ky.	10	2	13	-	8,139	8,053	1	1	1	-	-	-
Tenn.	6	-	16	1	27,825	28,237	-	13	-	1	-	-
Ala.	5	12	19	5	20,760	20,902	6	10	1	-	-	-
Miss.	2	-	3	1	11,615	11,080	1	-	-	-	-	-
W.S. CENTRAL	278	9	93	4	102,913	113,657	67	38	5	33	-	19
Ark.	1	-	-	2	9,143	9,079	4	-	-	-	-	1
La.	40	-	8	-	22,383	21,674	12	4	-	5	-	1
Okla.	9	1	19	1	11,276	13,052	4	3	3	-	-	-
Tex.	228	8	66	1	60,111	69,852	47	31	2	28	-	17
MOUNTAIN	68	7	31	11	24,950	25,981	68	21	5	6	-	8
Mont.	-	-	-	-	955	1,101	24	2	1	-	-	-
Idaho	-	-	-	-	1,186	1,158	1	-	-	-	-	-
Wyo.	1	-	-	-	662	681	1	-	-	-	-	-
Colo.	35	3	10	-	7,155	7,287	14	2	1	1	-	-
N. Mex.	1	-	-	-	3,007	3,186	-	1	-	-	-	-
Ariz.	18	-	12	3	6,970	7,369	14	10	3	4	-	6
Utah	7	4	9	8	1,189	1,250	5	3	-	1	-	1
Nev.	6	-	-	-	3,826	3,949	9	3	-	-	-	1
PACIFIC	934	45	156	9	103,426	113,790	206	145	41	44	-	112
Wash.	50	24	8	-	7,929	8,971	21	17	6	9	-	3
Oreg.	8	-	-	-	5,980	6,088	11	3	4	-	-	1
Calif.	863	19	145	9	85,214	93,670	174	124	31	35	-	89
Alaska	1	-	-	-	2,556	2,926	-	1	-	-	-	-
Hawaii	12	2	3	-	1,747	2,135	-	-	-	-	-	19
Guam	-	U	-	-	103	121	U	U	U	U	U	-
P.R.	53	1	3	2	3,018	2,615	8	9	-	3	-	5
V.I.	-	-	-	-	410	283	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	-	-	-	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending November 24, 1984 and November 26, 1983 (47th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983
UNITED STATES	894	57	2,195	2	290	1,415	2,409	33	2,598	17	2,001	2,138	12	708	906
NEW ENGLAND	47	-	94	-	12	20	164	1	88	-	61	71	1	21	17
Maine	-	-	-	-	-	-	1	1	28	-	4	5	-	1	-
N.H.	-	-	33	-	3	3	9	-	18	-	9	10	-	1	4
Vt.	7	-	2	-	5	-	29	-	5	-	23	8	-	-	5
Mass.	26	-	49	-	-	8	66	-	18	-	17	36	-	18	6
R.I.	4	-	-	-	-	-	17	-	10	-	4	5	-	-	-
Conn.	10	-	10	-	4	9	42	-	9	-	4	7	1	1	2
MID ATLANTIC	141	4	125	1	45	119	417	5	302	1	183	352	-	224	145
Upstate N.Y.	28	4	31	-§	14	18	132	4	91	-	103	114	-	99	30
N.Y. City	46	-	89	1§	21	71	83	1	28	1	9	56	-	103	86
N.J.	37	-	5	-	3	27	83	-	134	-	13	19	-	18	3
Pa.	30	-	-	-	7	3	119	-	49	-	58	163	-	4	26
E.N. CENTRAL	79	-	617	-	75	706	385	5	983	3	443	482	-	96	131
Ohio	19	-	3	-	6	87	127	-	473	-	75	147	-	2	2
Ind.	4	-	2	-	1	406	48	3	61	2	231	55	-	5	25
Ill.	27	-	179	-	1	205	83	2	179	-	26	167	-	59	58
Mich.	15	-	411	-	54	7	79	-	183	1	31	40	-	22	17
Wis.	14	-	22	-	13	1	48	-	86	-	80	73	-	8	29
W.N. CENTRAL	24	2	49	-	9	8	151	-	106	-	125	131	-	39	42
Minn.	7	-	44	-	3	1	31	-	6	-	16	47	-	4	9
Iowa	2	-	-	-	-	-	22	-	25	-	13	6	-	1	-
Mo.	8	2	5	-	1	1	47	-	10	-	20	23	-	-	-
N. Dak.	1	-	-	-	-	-	2	-	2	-	-	2	-	3	-
S. Dak.	1	-	-	-	-	-	6	-	-	-	9	8	-	-	-
Nebr.	3	-	-	-	-	-	13	-	4	-	13	3	-	-	-
Kans.	2	-	-	-	5	6	30	-	59	-	54	42	-	31	33
S. ATLANTIC	120	-	19	-	33	205	499	2	191	4	161	254	-	26	97
Del.	4	-	-	-	-	-	3	-	2	-	2	5	-	2	-
Md.	29	-	8	-	14	10	39	-	40	-	13	33	-	1	3
D.C.	1	-	-	-	5	-	8	-	-	-	-	-	-	-	-
Va.	31	-	1	-	4	23	60	-	17	-	15	50	-	-	2
W. Va.	1	-	-	-	-	-	5	-	39	-	11	9	-	-	-
N.C.	12	-	-	-	1	1	80	1	21	1	35	28	-	-	10
S.C.	2	-	-	-	-	4	56	-	5	-	1	14	-	-	1
Ga.	14	-	1	-	1	8	94	-	22	-	17	69	-	2	13
Fla.	26	-	9	-	8	159	154	1	45	3	67	46	-	21	68
E.S. CENTRAL	10	-	1	-	5	25	132	1	54	-	14	33	-	20	19
Ky.	1	-	1	-	-	1	49	-	11	-	2	14	-	14	18
Tenn.	2	-	-	-	2	-	34	-	17	-	7	8	-	-	-
Ala.	7	-	-	-	3	5	33	-	6	-	1	5	-	3	1
Miss.	-	-	-	-	-	19	16	1	20	-	4	6	-	3	-
W.S. CENTRAL	78	51	591	-	25	78	267	7	167	2	318	444	9	70	118
Ark.	-	-	8	-	-	13	46	-	8	2	19	26	-	3	-
La.	9	-	8	-	-	29	54	-	-	-	8	11	-	-	10
Okla.	10	-	-	-	8	1	27	N	N	-	238	325	-	-	-
Tex.	59	51	575	-	17	35	140	7	159	-	53	82	9	67	108
MOUNTAIN	27	-	113	-	32	31	81	3	244	1	122	130	-	21	36
Mont.	2	-	-	-	-	4	2	-	9	-	19	2	-	-	3
Idaho	2	-	-	-	23	10	10	-	9	-	7	16	-	1	8
Wyo.	-	-	-	-	-	1	3	-	2	-	6	6	-	2	8
Colo.	7	-	-	-	6	3	28	1	27	-	45	133	-	2	1
N. Mex.	1	-	88	-	-	-	8	N	N	1	12	13	-	1	-
Ariz.	10	-	-	-	1	1	16	1	181	-	24	29	-	4	8
Utah	5	-	25	-	2	12	8	-	11	-	7	31	-	7	7
Nev.	-	-	-	-	-	-	6	1	5	-	2	-	-	4	1
PACIFIC	368	-	586	1	54	223	313	9	463	6	574	141	2	191	301
Wash.	18	-	138	-	15	28	49	1	51	4	318	19	-	1	9
Oreg.	13	-	-	-	-	10	46	N	N	-	30	10	-	2	14
Calif.	333	-	289	1†	35	181	210	8	375	2	150	105	2	182	276
Alaska	-	-	-	-	-	2	7	-	13	-	1	4	-	1	1
Hawaii	4	-	159	-	4	2	1	-	24	-	75	3	-	5	1
Guam	1	U	83	U	2	2	1	U	5	U	-	-	U	2	-
P.R.	4	-	121	-	-	5	-	-	5	-	-	-	-	-	2
V.I.	-	-	-	-	-	-	-	U	-	U	-	-	U	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-								

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending November 24, 1984 and November 26, 1983 (47th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum 1984	Cum 1983	1984	Cum 1984	Cum 1983	Cum 1984	Cum 1984	Cum 1984	Cum 1984
UNITED STATES	24,865	29,267	10	19,130	21,060	274	337	841	4,856
NEW ENGLAND	480	623	-	571	647	7	20	6	47
Maine	10	19	-	28	32	-	-	-	13
N.H.	14	21	-	26	35	-	-	-	16
Vt.	1	3	-	8	10	-	-	-	-
Mass.	266	400	-	315	342	7	17	4	10
R.I.	20	21	-	48	57	-	-	-	-
Conn.	169	159	-	146	171	-	3	2	8
MID ATLANTIC	3,291	3,830	-	3,479	3,728	1	52	27	495
Upstate N.Y.	260	361	-	554	585	-	12	10	111
N.Y. City	1,984	2,205	-	1,420	1,508	1	17	3	-
N.J.	603	756	-	773	785	-	17	3	36
Pa.	444	508	-	732	850	-	6	11	348
E.N. CENTRAL	1,251	1,563	4	2,498	2,828	8	56	60	204
Ohio	218	410	1	445	449	-	7	39	25
Ind.	125	118	-	305	324	-	11	7	21
Ill.	502	731	1	1,033	1,219	8	22	11	72
Mich.	336	222	2	568	690	-	7	3	21
Wis.	70	82	-	147	146	-	9	-	65
W.N. CENTRAL	331	351	-	580	562	81	10	52	698
Minn.	86	131	-	101	137	1	3	1	85
Iowa	11	22	-	58	59	-	-	6	138
Mo.	167	131	-	293	336	43	5	17	63
N. Dak.	9	2	-	11	6	-	-	-	138
S. Dak.	1	11	-	22	37	34	-	5	182
Nebr.	15	15	-	29	21	-	-	5	43
Kans.	42	39	-	66	66	3	2	18	49
S. ATLANTIC	7,133	7,926	-	4,006	4,207	8	39	390	1,437
Del.	19	35	-	50	59	-	-	1	6
Md.	443	479	-	396	335	1	2	29	814
D.C.	300	348	-	157	171	1	6	-	-
Va.	384	530	-	384	454	1	8	51	196
W. Va.	18	25	-	124	125	-	-	7	40
N.C.	780	788	-	616	681	1	1	171	25
S.C.	690	499	-	471	391	-	1	79	58
Ga.	1,059	1,421	-	609	691	4	7	47	175
Fla.	3,440	3,801	-	1,199	1,300	-	14	5	123
E.S. CENTRAL	1,816	1,969	1	1,789	1,888	6	8	89	238
Ky.	90	162	-	419	473	-	2	18	51
Tenn.	474	530	-	520	579	5	2	46	78
Ala.	612	764	1	526	475	-	2	15	109
Miss.	640	513	-	324	361	1	2	10	-
W.S. CENTRAL	6,135	7,525	-	2,256	2,611	117	22	200	953
Ark.	183	172	-	255	313	83	-	29	99
La.	1,082	1,541	-	322	421	7	1	4	55
Okla.	190	186	-	215	226	19	4	118	97
Tex.	4,680	5,626	-	1,464	1,651	8	17	49	702
MOUNTAIN	586	611	3	514	591	33	13	13	266
Mont.	3	7	-	17	42	3	1	8	117
Idaho	23	7	1	27	30	8	-	1	11
Wyo.	4	12	-	4	12	1	-	3	22
Colo.	158	139	-	64	91	6	5	1	38
N. Mex.	79	168	-	96	104	2	3	-	11
Ariz.	218	156	-	237	233	4	3	-	45
Utah	18	22	2	34	37	4	-	-	6
Nev.	83	100	-	35	42	5	1	-	10
PACIFIC	3,842	4,869	2	3,437	3,898	13	117	4	518
Wash.	133	186	2	180	219	3	3	-	3
Oreg.	108	134	-	136	164	2	2	1	1
Calif.	3,522	4,463	-	2,858	3,227	8	103	2	506
Alaska	6	12	-	65	73	-	1	1	8
Hawaii	73	74	-	198	215	-	8	-	-
Guam	-	-	U	5	7	-	-	-	-
P.R.	704	879	-	348	433	-	5	-	59
V.I.	11	17	-	3	2	-	3	-	-
Pac. Trust Terr.	-	-	U	-	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending November 24, 1984 (47th Week Ending)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	590	406	105	37	16	26	48
Boston, Mass.	142	78	25	20	1	18	16
Bridgeport, Conn.	38	30	3	3	-	2	2
Cambridge, Mass.	22	17	4	1	-	-	2
Fall River, Mass.	28	22	4	-	2	-	1
Hartford, Conn.	51	31	15	2	2	1	5
Lowell, Mass.	29	26	2	1	-	-	2
Lynn, Mass.	14	10	2	-	2	-	-
New Bedford, Mass.	16	15	1	-	-	-	-
New Haven, Conn.	59	36	15	7	-	1	1
Providence, R.I.	36	28	4	1	-	3	4
Somerville, Mass.	6	5	1	-	-	-	-
Springfield, Mass.	54	38	13	1	2	-	4
Waterbury, Conn.	37	23	8	1	4	1	3
Worcester, Mass.	58	47	8	-	3	-	8
MID. ATLANTIC	2,274	1,478	503	183	58	52	111
Albany, N.Y.	56	30	15	2	4	4	2
Allentown, Pa.	16	14	1	1	-	-	-
Buffalo, N.Y.	78	61	8	3	4	2	7
Camden, N.J.	24	15	5	2	1	1	1
Elizabeth, N.J.	17	11	3	1	2	-	-
Erie, Pa.†	36	22	10	3	1	-	6
Jersey City, N.J.	34	25	6	2	-	1	1
N.Y. City, N.Y.	1,226	792	267	117	31	19	57
Newark, N.J.	53	22	17	7	5	2	6
Paterson, N.J.	23	15	7	-	-	1	1
Philadelphia, Pa.†	296	172	78	26	4	16	8
Pittsburgh, Pa.†	64	40	19	3	1	1	3
Reading, Pa.	34	28	4	2	-	-	4
Rochester, N.Y.	114	83	20	6	2	3	4
Schenectady, N.Y.	32	25	6	-	1	-	1
Scranton, Pa.†	18	16	1	1	-	-	1
Syracuse, N.Y.	78	51	22	1	2	2	2
Trenton, N.J.	27	18	6	3	-	-	-
Utica, N.Y.	16	12	3	1	-	-	2
Yonkers, N.Y.	33	26	5	2	-	-	5
E.N. CENTRAL	1,736	1,245	285	97	55	45	67
Akron, Ohio	20	12	5	1	1	1	-
Canton, Ohio	11	7	3	1	-	-	1
Chicago, Ill. §	483	419	5	7	11	12	11
Cincinnati, Ohio	131	96	25	7	3	-	12
Cleveland, Ohio	118	74	28	12	2	2	6
Columbus, Ohio	118	72	27	9	6	4	1
Dayton, Ohio	65	32	22	8	2	1	1
Detroit, Mich.	178	108	38	15	12	5	2
Evansville, Ind.	31	25	4	1	-	1	-
Fort Wayne, Ind.	33	21	7	3	-	2	4
Gary, Ind.	11	8	2	1	-	-	-
Grand Rapids, Mich.	39	28	6	3	-	2	1
Indianapolis, Ind.	140	91	32	10	4	3	4
Madison, Wis.	35	21	7	4	3	-	5
Milwaukee, Wis.	78	51	13	3	4	7	2
Peoria, Ill.	23	16	6	1	-	-	6
Rockford, Ill.	34	24	7	1	1	1	2
South Bend, Ind.	43	26	11	3	2	1	2
Toledo, Ohio	116	77	25	7	4	3	7
Youngstown, Ohio	49	37	12	-	-	-	-
W.N. CENTRAL	575	387	119	30	23	16	35
Des Moines, Iowa	50	33	10	3	3	1	4
Duluth, Minn.	19	13	3	1	1	1	1
Kansas City, Kans.	23	13	5	2	2	1	2
Kansas City, Mo.	122	90	25	3	1	3	11
Lincoln, Nebr.	18	12	5	-	1	-	1
Minneapolis, Minn.	51	31	13	2	2	3	2
Omaha, Nebr.	60	37	16	3	3	1	5
St. Louis, Mo.	118	84	20	6	3	5	5
St. Paul, Minn.	65	46	9	7	3	-	1
Wichita, Kans.	49	28	13	3	4	1	3
S. ATLANTIC	1,136	712	263	93	28	39	42
Atlanta, Ga.	123	79	29	9	3	3	2
Baltimore, Md.	208	119	57	12	4	16	7
Charlotte, N.C.	77	41	18	9	5	4	4
Jacksonville, Fla.	62	42	14	4	2	-	3
Miami, Fla.	142	103	23	10	5	1	8
Norfolk, Va.	51	29	13	6	2	1	4
Richmond, Va.	67	44	11	9	1	1	4
Savannah, Ga.	31	19	12	-	-	-	-
St. Petersburg, Fla.	84	72	9	2	1	-	7
Tampa, Fla.	69	38	17	10	-	4	1
Washington, D.C.	150	84	40	19	1	6	1
Wilmington, Del.	72	42	20	3	4	3	1
E.S. CENTRAL	530	350	125	25	10	19	33
Birmingham, Ala.	53	37	10	2	2	2	1
Chattanooga, Tenn.	42	31	6	1	-	4	3
Knoxville, Tenn.	48	34	12	1	-	1	3
Louisville, Ky.	83	56	17	4	4	2	7
Memphis, Tenn.	156	94	44	10	1	6	12
Mobile, Ala.	44	32	10	-	1	1	3
Montgomery, Ala.	35	27	5	2	-	1	-
Nashville, Tenn.	69	39	21	5	2	2	4
W.S. CENTRAL	994	576	236	100	36	46	32
Austin, Tex.	25	19	3	2	1	-	3
Baton Rouge, La.	43	24	7	5	1	6	3
Corpus Christi, Tex.	23	16	4	2	1	-	1
Dallas, Tex.	133	65	39	13	8	8	4
El Paso, Tex.	41	24	10	5	2	-	2
Fort Worth, Tex.	85	60	16	7	-	2	4
Houston, Tex.	222	111	57	37	10	7	2
Little Rock, Ark.	66	42	12	6	3	3	4
New Orleans, La.	122	72	26	9	5	10	-
San Antonio, Tex.	140	80	40	10	4	6	6
Shreveport, La.	44	24	14	3	-	3	1
Tulsa, Okla.	50	39	8	1	1	1	2
MOUNTAIN	586	371	120	47	22	26	32
Albuquerque, N.Mex.	63	38	17	5	3	-	-
Colo. Springs, Colo.	20	16	2	2	-	-	3
Denver, Colo.	112	63	27	9	3	10	8
Las Vegas, Nev.	71	48	12	8	1	2	5
Ogden, Utah	20	15	4	-	1	-	2
Phoenix, Ariz.	143	91	25	15	8	4	2
Pueblo, Colo.	24	18	2	1	3	-	1
Salt Lake City, Utah	48	24	10	3	1	10	-
Tucson, Ariz.	85	58	21	4	2	-	11
PACIFIC	1,570	1,023	328	128	37	50	90
Berkeley, Calif.	16	12	2	1	-	1	1
Fresno, Calif.	66	44	11	5	1	5	5
Glendale, Calif.	8	7	1	-	-	-	-
Honolulu, Hawaii	71	42	22	5	-	2	5
Long Beach, Calif.	90	60	21	7	1	1	4
Los Angeles, Calif.	310	194	59	44	5	6	7
Oakland, Calif.	68	51	7	3	3	4	1
Pasadena, Calif.	26	18	6	1	-	1	2
Portland, Oreg.	129	84	27	8	6	4	13
Sacramento, Calif.	136	92	30	6	3	4	16
San Diego, Calif.	104	69	25	8	2	-	15
San Francisco, Calif.	160	93	50	10	-	6	7
San Jose, Calif.	146	93	27	14	4	8	8
Seattle, Wash.	168	114	28	13	8	5	1
Spokane, Wash.	47	32	11	1	2	1	3
Tacoma, Wash.	25	18	1	2	2	2	2
TOTAL	9,991††	6,548	2,084	740	285	319	490

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza.

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Analysis of Trace Metals — Continued

a separate sample-preparation procedure and, consequently, a separate sample. As a result, developing a profile of occupational exposure for a worker or group of workers was expensive and time-consuming. Now, however, a method combining new analytic instrumentation and techniques for sample preparation has been developed and is described below.

This method, called inductively coupled plasma-atomic emission spectroscopy (ICP-AES), allows simultaneous, multi-element analysis and has been successfully applied to industrial hygiene samples collected from workplace atmospheres (*2*). The technique has also been adapted and extended for biologic monitoring by the National Institute for Occupational Safety and Health (NIOSH). Trace metals are first extracted from urine samples with a polydithiocarbamate resin (*3*). This resin is well-suited for such extractions because of its unique characteristic of complexing with trace metals while showing little significant affinity for the alkali or alkaline earth elements (e.g., sodium, potassium, and calcium), which occur in large quantities as dissolved salts in urine. After extraction, the resin is digested; the metals are dissolved in a small volume of acid; and ICP-AES analysis is conducted. This procedure allows the simultaneous quantitative measurement from a single sample of 17 elements—aluminum, barium, cadmium, chromium, copper, iron, lanthanum, lead, manganese, molybdenum, nickel, platinum, silver, strontium, tin, titanium, and zinc).

Reported by Methods Research Br, Div of Physical Sciences and Engineering, National Institute for Occupational Safety and Health, CDC.

Editorial Note: In addition to the 4 million workers occupationally exposed to elements or their alloys, a significantly larger number is exposed to the salts and aerosols of these metals. This new methodology provides a means for readily establishing baseline data for trace metals in urine samples of both exposed and nonexposed workers. With quantitation of several elements from a single sample, these biologic monitoring data can be collected considerably more efficiently than with traditional analytic methods. In addition to establishing baseline data, the methodology can also be used in screening to determine whether unsafe levels of toxic metals exist. The methodology developed from this work is included in the *NIOSH Manual of Analytical Methods, Third Edition* (*4*).

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Epidemiologic Notes and Reports

Streptococcal Foodborne Outbreaks — Puerto Rico, Missouri

Two large outbreaks of foodborne group A streptococcal pharyngitis have been reported to CDC during 1984 in Puerto Rico and Missouri.

Puerto Rico: On August 3, 1984, an outbreak occurred among guests attending a party in a private home in San Juan, Puerto Rico. During that weekend, numerous party attendees became ill with sore throat, myalgia, cervical adenopathy, and fever. Many were seen by physicians and had exudative pharyngitis. One was hospitalized.

Streptococcal Foodborne Outbreaks — Continued

The Puerto Rico Department of Health was notified of the outbreak on August 8. Because of the high attack rate and the clustering of cases, the outbreak was presumed to be foodborne. Self-administrated questionnaires were received from 45 (96%) of the 47 party attendees, and 25 questionnaires were received from their household contacts. Throat cultures were obtained from 44 (94%) of party attendees.

Four persons were excluded from the questionnaire analysis—three because of onset of pharyngitis before the party, and one, because of an incomplete questionnaire. Of the 41 remaining persons, 23 (56%) had illness meeting the case definition. The attack rate for persons who ate carrucho, a conch salad, was 70%, compared with 29% for persons who did not eat carrucho ($p = 0.013$). No other food showed significantly different attack rates. No dose-response effect for persons eating carrucho was demonstrated, nor was a difference in attack rates observed between persons who ate early in the evening and those who ate later in the evening. That carrucho was the vehicle for transmission was further supported by the fact that two of four persons who did not attend the party but who ate carrucho that had been brought home to them became ill with pharyngitis. The secondary attack rate for household contacts who did not eat carrucho was 4%. The incubation period was 12-60 hours (median 24 hours).

Throat cultures from 11 party attendees grew group A streptococci, as did a small sample of carrucho remaining from the party. All cultures were of the same serotype (M nontypable, T12, SOR+).

The carrucho was prepared in a small beachside restaurant outside San Juan. The conch used to make the carrucho came in a torn, unlabeled plastic bag and was allegedly imported from Santo Domingo. None of the uncooked conch remained for testing, but the method of salad preparation, which reportably included boiling the conch for 2½ hours, should have been adequate to kill any streptococci. Seventy pounds of carrucho was made the afternoon of the party. The 25 pounds purchased by the party's host was left in an automobile at ambient temperature for 3 hours before delivery to the party.

Approximately 2,000 persons who ate in the restaurant that weekend were potentially exposed to the 45 pounds of remaining carrucho. Because there was no way to identify individuals who might have eaten there that weekend, four clinical microbiology laboratories serving the San Juan area were surveyed in an attempt to determine if the number of positive throat cultures in August was higher than the number during the same time the previous year; no increase was observed.

All foodhandlers at the restaurant were interviewed and examined for skin lesions, and cultures (pharyngeal, nasal, and hand) were obtained. No cultures were positive, and no histories were obtained of recent pharyngitis or skin lesions. Food prepared at the restaurant, including carrucho, during the week after the party was cultured; all was negative for group A streptococci.

Because party attendees were potentially exposed to streptococci, the Puerto Rico Department of Health recommended that all attendees who developed symptoms of pharyngitis, regardless of culture results, receive antibiotic therapy effective against group A streptococci.

Missouri: Another outbreak occurred among participants from seven states at a meeting held at a Kansas City, Missouri, hotel from May 31, to June 1, 1984. On June 6, the Kansas City Health Department was notified of three cases of group A beta-hemolytic streptococcal pharyngitis occurring in three technicians from one blood bank who had attended the meeting. Other cases were subsequently reported among persons who attended the meeting. Clustering of cases and a high attack rate suggested a foodborne source.

Streptococcal Foodborne Outbreaks — Continued

A questionnaire was administered by telephone or mail to 136 (98%) of the 139 persons identified as having attended the conference. Cases were defined as persons with acute onset of sore throat between May 31 and June 5, who had had no antecedent contact to household members with pharyngitis. Severity of illness ranged from minor discomfort to symptoms resulting in several days' absence from work. Positive cultures for group A streptococci were reported for 13 (93%) of 14 individuals from whom throat cultures were obtained. However, none of the cultures were still available for typing or confirmation by the time of investigation. The survey implicated a luncheon held May 31. Sixty (57%) cases among the 106 persons who attended it were identified, compared with no cases among 30 conference attendees who did not attend the luncheon ($p < 0.0001$). Food-specific attack rates suggested macaroni salad or mousse as possible vehicles of transmission. The attack rate for persons who ate macaroni salad was 88%, compared with 47% for those who did not ($p < 0.0001$), but only one-third of persons who were ill gave histories of having eaten macaroni salad. The attack rate for persons who ate mousse was 63%, compared with 39% for persons who did not ($p = 0.053$), and, since 82% of ill persons reported having eaten the mousse, it was considered more likely if only one vehicle were involved. The incubation period of the illness was 24-36 hours (median 36 hours).

All the food for the luncheon was prepared by five hotel employees. The foodhandlers were interviewed and examined, and cultures were obtained. All were negative for group A streptococci, and no visible skin lesions were found on any worker. One worker claimed to have had a sore throat the day of the luncheon but did not seek medical attention.

The pastry chef had prepared two types of mousse the morning of the luncheon. Although it was refrigerated for 30 minutes during one phase of preparation, the final product was kept at room temperature for 1-2 hours before the luncheon.

Reported by JG Rigau, MD, Commonwealth Epidemiologist, Puerto Rico Dept of Health; T Martin, V Gibson, D Giedinghagen, GL Hoff, PhD, Div of Communicable Disease Control, Div of Environmental Health, Kansas City Health Dept, HD Donnell, Jr, MD, State Epidemiologist, Missouri Dept of Social Svcs; Respiratory and Special Pathogens Epidemiology Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Before the advent of pasteurization of milk and availability of adequate refrigeration, foodborne streptococcal outbreaks were very common. Outbreaks resulting in epidemics of scarlet fever, rheumatic fever, and suppurative complications were reported. Improvements in sanitation have resulted in foodborne streptococcal outbreaks becoming relatively uncommon (*1-3*).

These outbreaks show the difficulties involved in recognizing foodborne illness. Foodborne transmission of streptococci, rather than person-to-person transmission, is suggested by a large clustering of cases, a shorter incubation period, and a higher attack rate. Unless disease occurs in a setting where people who are ill are likely to notice the epidemic themselves, it is difficult for public health officials to detect the increased incidence of streptococcal pharyngitis in the community, especially since only a small percentage of persons with sore throats seek medical attention and ultimately receive treatment for the illness. The Puerto Rico outbreak was recognized only because a number of ill people worked in the same office. Initially, the party attendees felt the illness resulted from close person-to-person contact; only when persons who were not at the party ate party food and became ill did the office manager notify the health department. The second outbreak almost escaped detection, since the illness peaked after the conference had ended, and the participants had returned to their homes in seven states.

Streptococcal Foodborne Outbreaks – Continued

It is unknown how many cases of endemic streptococcal pharyngitis are caused by foodborne transmission. It is important to recognize that rheumatic fever and glomerulonephritis may result from outbreaks of these infections.

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International Notes

Quarantine Measures

The following change should be made in the "Health Information for International Travel," Supplement to the *MMWR*, Vol. 33, 1984.

NIGER

Cholera — Delete all information on pages 15 and 46.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

*U.S. Government Printing Office: 1984-746-149/10025 Region IV

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